

Claims

1. An internal antenna for a flat radio device having a signal ground, which antenna comprises a monopole-type base element with a feed conductor and a parasitic element functioning as an auxiliary radiator, and a single matching element
5 connected between the parasitic element and the signal ground to optimize antenna matching.
2. An antenna according to claim 1, said base element having a first branch and a second branch, between which branches being an electromagnetic coupling to set the ratio of the fundamental resonating frequency and its nearest harmonic of the
10 base element such that the fundamental resonating frequency falls into frequency range of a first radio system and said nearest harmonic falls into frequency range of a second radio system.
3. An antenna according to claim 2, wherein a structure constituted of the parasitic element and the matching element has a first resonating frequency
15 arranged to fall into frequency range of the first radio system, and a second resonating frequency arranged to fall into frequency range of the second radio system.
4. An antenna according to claim 1, said radio device having a circuit board, and the base element and the parasitic element being substantially on top of one another
20 as viewed along the direction of the normal of said circuit board.
5. An antenna according to claim 4, the base element and the parasitic element being rigid conductive wires aside said circuit board as viewed along the direction of the normal of the circuit board.
6. An antenna according to claim 4, the parasitic element being a conductive
25 strip on a surface of said circuit board and the base element being a rigid conductive piece.
7. An antenna according to claim 4, the base element being a conductive strip on a surface of said circuit board and the parasitic element being a rigid conductive piece.
- 30 8. An antenna according to claim 1, the matching element being a wound conductive wire.

9. An antenna according to claim 6, the matching element being a conductive strip on a surface of said circuit board.
10. A radio device having a signal ground and an internal antenna, which comprises a monopole-type base element with a feed conductor and a parasitic element functioning as auxiliary radiator, and a single matching element connected between the parasitic element and the radio device signal ground to optimize antenna matching.
11. A radio device according to claim 10 having a first part and a second part such that these parts can be turned on a hinge one upon another, said antenna being located within the first part.